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IS 10106-1-3 (1986): Packaging code, Part 1: Product packaging, Section 3 Textiles, fabrics and allied products [TED 24: Transport Packages]



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Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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IS : 10106 (Part 1/Sec 3) - 1986

Indian Standard

PACKAGING CODE

PART 1 PRODUCT PACKAGING

Section 3 Textiles, Fabrics and Allied Products

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Indian Standard

PACKAGING CODE

PART 1 PRODUCT PACKAGING

Section 3 Textiles, Fabrics and Allied Products

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Indian Standard

PACKAGING CODE

PART 1 PRODUCT PACKAGING

Section 3 Textiles, Fabrics and Allied Products

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 22 October 1986, after the draft finalized by the Packaging Code Sectional Committee had been approved by the Marine, Cargo Movement and Packaging Division Council.

0.2 The packaging code is being issued in the following parts, each having one or more sections:

- Part 1 Product packaging
- Part 2 Packaging materials
- Part 3 Ancillary materials
- Part 4 Packages
- Part 5 Packaging operations
- Part 6 Storage and transportation
- Part 7 Packaging machinery

0.2.1 This section (Part 1/Sec 3) of the code, which deals with textiles, fabrics and allied products, is intended to provide guidance to manufacturers and users in the type of packaging best suited for a particular product.

1. SCOPE

1.1 This standard (Part 1/Sec 3) lays down guidelines for the packaging of textiles, fabrics and allied products. These are dealt with under the headings jute, cotton, wool, man-made fabric and miscellaneous.

2. TERMINOLOGY

2.1 For definitions of terms relating to textiles, fabrics and allied products, reference may be made to the following standards:

IS : 232-1967 Glossary of textile terms-natural fibres (*first revision*)

- IS : 1324-1966 Glossary of textile terms relating to man-made fibre and fabric industry (*first revision*)
- IS : 2364-1979 Glossary of textile terms — fabrics made from natural fibres (*first revision*)
- IS : 3596-1967 Glossary of terms relating to hosiery
- IS : 5476-1969 Glossary of terms relating to jute

3. JUTE

3.0 Jute products are in great demand and huge quantities are being exported. Proper packaging is essential to give adequate protection against possible damage due to normal handling during transit and to ensure that the products reach their destination in a sound condition. Jute products are packed either in rolls or in bales.

3.1 Packaging in Rolls — The jute cloth is wound in rolls and covered first with a layer of polyethylene sheet or other waterproof material. This is further wound with jute cloth, stitched with jute twine and marked with the desired information. For details, *see* IS : 4744-1968*.

3.2 Packaging in Bales — Fabrics or bags are 'made up' in bales and the top and bottom layers are covered with a pack sheet of the same quality as the bale covering. The bales covering is then stitched with jute twine and securely bound with steel strips running at right angles to the bale length. The bales are then compressed to a density of dead weight volume and marked with the desired information. For details, *see* IS : 2873-1969†.

4. COTTON

4.0 Cotton yarn, cotton cloth, hosiery yarn and hosiery goods are to be suitably packed for transportation by rail, road and sea. An outline of the packaging methods is given below. Reference may also be made to the following Indian Standards for complete details:

- IS : 293-1980 Code for seaworthy packaging of cotton yarn and cloth (*third revision*)
- IS : 1347-1972 Inland packaging of cotton cloth and yarn (*first revision*)
- IS : 3086-1965 Code for seaworthy packaging of cotton hosiery yarn and goods

*Packaging of jute products in rolls.

†Packaging of jute products in bales.

IS : 3325-1965 Code for inland packaging of cotton hosiery yarn and goods

4.1 Packaging for Inland Transportation

4.1.1 Yarn — Yarn may be cotton yarn or cotton hosiery yarn.

4.1.1.1 Cotton yarn — Yarn may be in the form of hanks, cones, cheeses and spools. Hanks are packed in bales while cones and cheeses in either cases or bags and spools in cases.

a) *Packing in bales* — The hanks are made into bundles and further packed in bales, which consist of the following layers from inside to outside, and are strapped and marked:

i) LLDPE, LDPE, HMHDPE film

or

Waterproof paper (1 layer)

ii) 2 layers of hessian of HDPE woven fabric or PP woven fabric

iii) Wooden or bamboo slats

b) *Packing in cases* — The cones, cheeses and spools are wrapped in low density polyethylene and packed in wooden cases having a layer of low density polyethylene or waterproof paper on the inside and a layer of medium weight hessian on the outside. Sealing of the outer layer is done with a waterproof adhesive and the lid is securely nailed and the case strapped and marked.

c) *Packing in bags* — Cones and cheeses are also packed in separate bags. In the case of cheeses, these are individually wrapped in polyethylene film or kraft paper and packed in bags having a layer each of wax paper, waterproof paper and hessian from inside to outside. In the case of cones a piece of commercial plywood is added between the layers of waterproof paper and hessian, both on top and bottom. The bags are then stitched and the bag containing cones is further bound by hoops.

4.1.1.2 Cotton hosiery yarn — This may be in the form of hanks or cones. The hanks and cones are packaged in bales and cases respectively.

a) *Packing in bales* — The hanks are pressed into bundles of square or rectangular shapes, tied and wrapped in kraft paper. The bundles are made into bales and the covering materials consisting of the following layers arranged from inside to outside in the order given below:

i) Kraft paper or fents.

ii) Light weight hessian or matting or fents.

- iii) Waterproof paper or polyethylene film.
- iv) Tarpaulin (only during monsoon months).
- v) Medium weight hessian.

The bale is pressed to make it tight, sewn and strapped.

- b) *Packing in cases* — Each cone is wrapped in kraft paper or in a polyethylene bag. The subsequent procedure is the same as for cotton yarn [see 4.1.1.1 (b)].

4.1.2 Cloth — Cloth may be in the form of grey cloth or processed cloth.

4.1.2.1 Grey cloth — Each piece of cloth is plaited and folded to proper size and packed in bales as in the case of cotton yarn [see 4.1.1.1 (a)].

4.1.2.2 Processed cloth — Processed cloth is packed either in bales or in cases.

- a) *Packing in bales* — Each piece is plaited, folded or wrapped on cardboard or strawboard. Each piece or bundle of pieces is wrapped in materials such as kraft paper, cellophane or polyethylene film which will not stain the fabrics. It is then packed in bales as in the case of grey cloth.
- b) *Packing in cases* — Each piece is 'made up' as is done in the case of bales and is further packed in cases in a similar manner to cotton yarn [see 4.1.1.1 (b)].

4.1.3 Hosiery Goods — Hosiery goods may be packed in bales, cases, bundles or cardboard boxes.

4.1.3.1 Packing in bales — The fabric is made into rolls or bundles and wrapped with kraft paper and tie. Garments are folded suitably, formed into a bundle with cardboard pieces on the top and bottom of the bundle, wrapped in kraft paper and tied. Sufficient number of rolls or bundles are packed in bales as in the case of cotton hosiery yarn [see 4.1.1.2 (a)] and marked suitably.

4.1.3.2 Packing in cases — Hosiery goods are folded suitably and placed in cardboard boxes. The superfine variety of hosiery garments are first put in polyethylene bags. A required number of cardboard boxes are placed in a wooden packing case lined with waterproof paper which is folded and sealed with a waterproof adhesive over the contents. The lid is securely nailed and the case strapped and marked. In monsoon months the case is covered with a layer of bitumen coated hessian cloth and suitably marked.

4.1.3.3 Packing in bundles (for post parcel) — Hosiery goods are folded suitably and wrapped with kraft paper in the shape of rectangular bundle. Cardboard pieces are placed on the top and bottom of the bundle, which is then wrapped in a layer of polyethylene film and then a layer of grey cotton cloth. This is then stitched and the seams sealed with sealing wax and the bundle suitably marked.

4.1.3.4 Packing in cardboard boxes (for post parcel) — Hosiery goods are suitably folded and put in polyethylene bags. These are arranged in cardboard boxes, lined with a layer of polyethylene film or other waterproof paper and then covered with a layer of grey cotton cloth. The boxes are then stitched and the seams sealed with sealing wax and suitably marked. In monsoon months the cardboard should be covered with a layer of bitumen coated hessian cloth.

4.2 Packing for Sea Transportation

4.2.1 Yarn

4.2.1.1 Cotton yarn — This may be in the form of hanks, cones, cheeses and spools. Hanks are packed in bales and the other forms in cases, CFB boxes or bags.

- a) *Packing in bales* — The hanks are made into bundles and kraft paper of suitable size is placed on top and bottom of the bundle, which is then tied. The bundles are packed to form bales having the following layers of material from inside to outside:

- i) Kraft paper.
- ii) Polyethylene film.
- iii) Hessian.
- iv) Polyethylene film.
- v) Hessian.

The bale is then stitched, strapped and labelled.

- b) *Packing in wooden cases* — Each piece of cone, cheese or spool is wrapped in polyethylene bag or kraft paper and a number of these packed in a wooden packing case having layers of kraft paper/sulphite paper, polyethylene film and hessian, from inside to outside. The hessian is tucked on the sides and the lid nailed and case strapped.
- c) *Packing in CFB boxes* — Each piece of cone, cheese or spool is wrapped, in polyethylene film or kraft paper and suitable number of these packed in the box with the inner loose liner of kraft/polyethylene laminate, which is sealed with a waterproof adhesive. The flaps of the box are secured with adhesive tape or by gluing. The box may be reinforced with plastic straps along the girth.

- d) *Packing in bags* — Each piece of cone, cheese or spool is wrapped in polyethylene film. Suitable number of these are then packed in a laminated hessian bag. The bag is closed by stitching.

4.2.1.2 Cotton hosiery yarn — Packaging is in bales or cases (CFB/ wooden) or bags.

- a) *Packing in bales* — The method is the same as for inland packing [see 4.1.1.2 (a)] except that the layers in the bale are as follows:
- i) Kraft paper/LLDPE/LDPE/HMEDPE or waterproof paper.
 - ii) Light weight hessian or man-made fabric or matting.
 - iii) Waterproof paper or plastic film.
 - iv) Hessian or man-made fabric lined with kraft paper.
 - v) Heavy cee cloth or man-made fabric.

- b) *Packing in wooden cases* — Each cone is wrapped in kraft paper and then packed in the manner as for cotton yarn [see 4.2.1.1 (b)].

- c) *Packing in CFB boxes* — Each piece of cone, cheese or spool shall be wrapped in polyethylene film or kraft paper and a suitable number packed in the box with the inner loose liner of kraft polyethylene laminate which is sealed with a waterproof adhesive. The subsequent procedure is same as for cotton yarn [see 4.2.1.1 (c)].

- d) *Packing in bags* — Each piece of cone, cheese or spool is wrapped in polyethylene film or kraft paper. Suitable number of these are then packed in a laminated hessian bag. The bag is closed by stitching.

4.2.2 Cloth — Cloth shall be grey cloth or processed cloth.

4.2.2.1 Grey cloth — Grey cloth may be packed in bales, cases or batch rolls.

- a) *Packing in bales* — Each piece of cloth is plaited or folded to the appropriate size and packed in bales as in the case of yarn [see 4.2.1.1 (a)].
- b) *Packing in cases* — Each piece of cloth is plaited or folded to the appropriate size and packed in cases as in the case of yarn [see 4.2.1.1 (b)].
- c) *Packing in batch rolls* — The cloth pieces are stitched from end to end to form a continuous length which is wound on paperboard plastic tubes plugged at the ends to prevent crushing and damage to the tubes. The rolls are then wrapped in the following

layers from inside to outside. The outermost layer is stitched and the roll strapped:

- i) Kraft paper
- ii) LLDPE/LDPE/HMHDPE film.
- iii) Hessian or man-made fabric lined with kraft paper.
- iv) LLDPE/LDPE/HMHDPE film.
- v) Hessian or man-made fabric lined with kraft paper.

4.2.2.2 Processed cloth — Processed cloth is packed in bales, wooden cases or CFB boxes.

- a) *Packing in bales* — Each piece is plaited or folded and wrapped on a carboard or strawboard. Each piece or bundle of pieces is then wrapped in materials such as cellulose, polyethylene film, kraft paper and sulphite paper. It is then packed in bales as in the case of grey cloth.
- b) *Packing in wooden cases* — The cloth piece is 'made up' as in (a) above and packed as in the case of grey cloth [see 4.2.2.1 (b)].
- c) *Packing in CFB boxes* — The cloth piece is 'made up' as in (a) above and packed as in the case of cotton hosiery yarn [see 4.2.1.2 (c)].

4.2.3 Hosiery Goods — Hosiery goods may be packed in bales, cases or cardboard boxes.

4.2.3.1 Packing in bales — Fabric is made into rolls (in case of continuous fabrics) or bundles, wrapped in kraft paper and tied. These are formed into bales as in the case of hosiery yarn [see 4.1.1.2 (a)] except that the layers from inside to outside are as follows:

- i) Light weight hessian or man-made fabrics.
- ii) LLDPE/LDPE/HMHDPE film.
- iii) Waterproof paper or plastic film.
- iv) Heavy cee cloth or man-made fabric.

4.2.3.2 Packing in cases — The procedure followed is the same as for hosiery goods for inland transportation (see 4.1.3.2) except that the wooden case is lined with a layer of kraft paper on the inside and waterproof paper of polyethylene film on the outside, instead of just waterproof paper.

4.2.3.3 Packing in cardboard boxes (for post parcel) — The procedure followed is the same as for hosiery goods packed for inland transportation (see 4.1.3.4).

5. WOOL

5.0 Raw wool, woollen and worsted yarn and cloth, wool hosiery yarn and goods are to be packed both for internal transportation by rail or road and for sea transportation. An outline of the packing methods is given below. Reference may be made to the following Indian Standards for complete details:

- IS : 32-1971 Code for seaworthy packaging of woollen and worsted yarn and cloth (*second revision*)
- IS : 741-1971 Code for inland packaging of woollen and worsted yarn and cloth (*first revision*)
- IS : 2156-1962 Code for packing raw wool for export
- IS : 2518-1964 Code for seaworthy packaging of wool hosiery yarn and goods
- IS : 3353-1966 Code for inland packing of wool hosiery yarn and goods

5.1 Packaging for Inland Transportation

5.1.1 Yarn — Yarn may be in the form of woollen yarn, worsted yarn and hosiery yarn.

5.1.1.1 Woollen and worsted yarn — These may be in the form of hanks, cheeses or balls. Hanks are packed in bales or cases and cheeses and balls in cases:

- a) *Packing in bales* — Hanks are made into bundles, which are sprinkled with a suitable insecticide and covered with a polyethylene film and tied. This is then made into bales having a layer each of polyethylene film, kraft paper and hessian, from inside to outside and then strapped.
- b) *Packing in cases* — The hanks, cheeses or balls are sprinkled with a suitable insecticide and packed in a polyethylene bag. This is placed in the case with a layer of polyethylene film on the inside and kraft paper on the outside. The outer layer is then sealed, the lid nailed and the case strapped.

5.1.1.2 Hosiery yarn — Hosiery yarn may be for machine knitting or for hand knitting. For machine knitting it is packed either in bales or cases and for hand knitting in cases.

- a) *Packing in bales* — Hanks of yarn are made into bundles and tied securely. They are then made into bales having the following layers from inside to outside:
 - i) Kraft paper or fents.

- ii) Light weight hessian or matting or fents;
- iii) Waterproof paper or LLDPE/LDPE/HMHDPE film.
- iv) Heavy weight hessian or man-made fabric.

The bale is pressed, stitched, labelled and strapped.

b) *Packing in cases*

- i) *For machine knitting* — The cones, spools or cheeses are wrapped in kraft paper or polyethylene bags and a suitable number of these placed in a wooden packing case lined with a layer of polyethylene film on the inside and light weight hessian on the outside. The hessian is stitched, the lid nailed and the case strapped.
- ii) *For hand knitting* — The required number of hanks or balls of similar quality, colour and size are placed in a polyethylene bag. A suitable number of these are arranged in a cardboard box. These are then packed in cases as the case of machine knitting yarn.

5.1.2 Cloth — Cloth may be packed in bales or cases.

5.1.2.1 Packing in bales — Each piece of cloth is sprinkled with a suitable insecticide and folded or wrapped on cardboard or strawboard and then wrapped in kraft paper or polyethylene film. This is then made into a bale having layers of kraft paper, polyethylene film and hessian from inside to outside. A layer of hessian laminated with polyethylene film or high density polyethylene woven fabric may be used as an alternate to the last two layers. This is then stitched and strapped.

5.1.2.2 Packing in wooden cases — Each piece is 'made up' as given in 5.1.2.1 and then placed in a wooden case lined with kraft paper on the inside and polyethylene on the outside. The lid of the case is nailed securely and the case strapped.

5.1.3 Hosiery Goods — These may be packed in bales, cases, bundles or cardboard boxes.

5.1.3.1 Packing in bales

- a) *Fabric* — This is made into rolls or bundles which are wrapped in kraft paper, tied and packed in bales as given in [5.1.1.2 (a)].
- b) *Garments* — These are folded neatly and made into bundles which are further packed as in the case of fabric [see (a) above].

5.1.3.2 Packing in wooden cases — The garments are folded and in case of fine variety are packed in polyethylene bags. Suitable numbers of these are then placed in cardboard boxes and packed in cases as given in [5.1.1.2 (b) (i)].

5.1.3.3 Packing in bundles — The garments are folded and a number of them arranged in the shape of a rectangular bundle and wrapped with kraft paper. This is then tied and wrapped with a layer of polyethylene film and further covered with a layer of grey cotton cloth which is stitched and sealed.

5.1.3.4 Packing in cardboard boxes — The garments are folded and individually wrapped in polyethylene bags. These are then arranged in a cardboard box which is wrapped with a layer of waterproof paper and then covered with a layer of grey cloth which is stitched and sealed.

5.2 Packing for Sea Transportation

5.2.1 Raw Wool — The box of the half press is filled with wool and layers of hessian are placed on the bottom of the box of the half press and under the top portion of the half press. The latter piece shall be such that the top and sides are covered when the bale is fully pressed. The press is operated till the bale is half pressed. This is then transferred to the full press. The two ends of the bale are covered with hessian and the bale pressed to optimum size and strapped.

5.2.2 Yarn

5.2.2.1 Woollen and worsted yarn — This may be in the form of hanks, cheeses or balls. Hanks are packed in bales or cases and cheeses and balls in cases.

- a) *Packing in bales* — The procedure followed is same as in the case of packing for inland transportation [see 5.1.1.1 (a)] except that the bale is made up of layer each of hessian, polyethylene film and hessian from inside to outside. A layer of hessian laminated with polyethylene film or HDPE woven fabric may be used as an alternate to the first two layers.
- b) *Packing in cases* — The procedure followed is same as in the case of packing for inland transportation [see 5.1.1.1 (b)] except that the case is lined with folding boxboard on the inside and waterproof paper on the outside.

5.2.2.2 Hosiery yarn — Packing is the same as given in 5.1.1.2 except that the lining materials are given below:

- a) *Packing in bales* — Layers from inside are:
 - i) Kraft paper.
 - ii) Polyethylene film or waxed paper.
 - iii) Medium weight hessian.
 - iv) Polyethylene film or waxed paper.
 - v) Heavy cee cloth.

b) *Packing in cases* — Lining materials from inside to outside are:

- i) polyethylenes film or waxed paper,
- ii) kraft paper, and
- iii) polyethylene film or waxed paper, and

5.2.2.3 Cloth — Packing is the same as given in 5.1.2 except that the lining materials are as given below:

a) *Packing in bales* — Layers from inside to outside are:

- i) hessian,
- ii) polyethylene film, and
- iii) hessian.

A layer of hessian laminated with polyethylene film or high density polyethylene woven fabric may be used as an alternate to the first two layers.

b) *Packing in cases* — Lining materials for the wooden packing cases are waterproof paper on the inside and polyethylene film on the outside.

5.2.2.4 Hosiery goods — These may be packed in cases or in cardboard boxes.

a) *Packing cases* — Each piece is sprinkled with suitable insecticide, folded and placed in polyethylene bag and a suitable number of these placed in cardboard boxes which are fastened and tied. The same procedure as given for hosiery yarn is followed (see 5.2.2.2).

b) *Packing in cardboard boxes* — Each piece is sprinkled with a suitable insecticide, folded and placed in a polyethylene bag. These are arranged in cardboard boxes lined with a layer of kraft paper and a layer of polyethylene film or waxed paper. The box is secured and bound with wire. The box is covered with a layer of polyethylene film and then a layer of cotton cloth which is then stitched and sealed with sealing wax.

6. MAN-MADE

6.1 For man-made fibres, fabrics and man-made fibre yarns to be packaged for transportation by rail, road and sea, reference may be made to IS : 2194-1963*, IS : 2195-1964† and IS : 3862-1966‡ for complete details.

*Code for seaworthy packaging of man-made fibre fabrics.

†Code for inland packaging of man-made fibre fabrics and man-made fibre yarn.

‡Packing of rayon staple fibres.

7. MISCELLANEOUS

7.0 A number of textile products require special packing. An outline for a few selected items is given below. For details reference may also be made to the following Indian Standards:

- IS : 1066-1980 Code of packaging of sewing threads (*first revision*).
- IS : 3256-1980 Code for inland packaging of ropes and cordages (*first revision*)
- IS : 4039-1975 Code for packaging of ready-made garments for export (*first revision*)
- IS : 5756-1970 Code for packaging of carpets

7.1 Ropes and Cordages

7.1.1 Ropes and Twines — Each coil is tied and wrapped in layers of LDPE, waterproof packing paper and hessian from inside to outside or an inner layer of LDPE and an outer layer of hessian and stitched.

7.1.2 Cords and Twines — A suitable number of hanks or skeins of cords are made into rectangular packages and packed as given in **7.1.1**.

7.2 Sewing Threads — Each cone or cheese is wrapped individually and in case of spools, tubes, hanks/skeins and reels, a suitable number are wrapped together. These are marked and packed in cases or cartons.

7.2.1 Packing in Cases — The item is packed in the case lined with two layers of kraft paper, one layer of hessian and one layer of polyethylene film from inside to outside. The lid is then sealed and case strapped.

7.2.2 Packing in Cartons — The item is packed in the carton lined with a polyethylene film and lid sealed and the carton strapped.

7.3 Readymade Garments for Export — Ready-made garments may be packed in bales, cases, cartons or as post parcels.

7.3.1 Packing in Bales — The garment is folded to a suitable size, and a number of these formed into a bundle which is wrapped in a polyethylene film or bag and tied. This is then packed into a bale having layers of hessian, polyethylene and hessian. The last layer is stitched and the bale strapped.

7.3.2 Packing in Cases — The garments are folded to suitable size using stiffeners such as cardboard, tissue paper or butter paper and secured by means of brass or aluminium pins or plastic clips. Each item is packed in a polyethylene bag and a required number put into a cardboard box

or wrapped in kraft paper. These are then packed in wooden cases having a polyethylene film on the inside and waterproof paper on outside. The outer layer is sealed, lid nailed and the case strapped.

7.3.3 Packing in Cartons — The same procedure is followed as in **7.3.2**, except that final packing is in cartons lined with a layer of either waterproof paper or polyethylene film which is sealed. The lid is then sealed and carton strapped.

7.3.4 Packing for Post Parcel — The procedure is same as given in **7.3.3**. The carton is further wrapped in a cotton cloth or hessian and then stitched and sealed with sealing wax.

7.4 Carpets — Carpets may be packed either in rolls (rolled width wise) or bales (folded and stacked one over the other). These are wrapped in a layer of polyethylene film on the inside and 2 layers of medium hessian as the second and third layer. For export purposes, two layers of polyethylene are used instead of one. The hessian is stitched and ears provided for lifting.

INTERNATIONAL SYSTEM OF UNITS (SI UNITS)

Base Units

QUANTITY	UNIT	SYMBOL
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

QUANTITY	UNIT	SYMBOL
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

QUANTITY	UNIT	SYMBOL	DEFINITION
Force	newton	N	$1 \text{ N} = 1 \text{ kg.m/s}^2$
Energy	joule	J	$1 \text{ J} = 1 \text{ N.m}$
Power	watt	W	$1 \text{ W} = 1 \text{ J/s}$
Flux	weber	Wb	$1 \text{ Wb} = 1 \text{ V.s}$
Flux density	tesla	T	$1 \text{ T} = 1 \text{ Wb/m}^2$
Frequency	hertz	Hz	$1 \text{ Hz} = 1 \text{ c/s (s}^{-1}\text{)}$
Electric conductance	siemens	S	$1 \text{ S} = 1 \text{ A/V}$
Electromotive force	volt	V	$1 \text{ V} = 1 \text{ W/A}$
Pressure, stress	pascal	Pa	$1 \text{ Pa} = 1 \text{ N/m}^2$